

KING ET AL.
"Satellite Positioning System
Receivers And Methods"
Atty. Docket No. CS21662RL

Appl. No. 10/606,555
Confirm. No. 5308
Examiner G. Issing
Art Unit 2683

1. (Original) A method in a satellite positioning system receiver, comprising:

receiving a plurality of issues of ephemeris data for at least one satellite;

deriving relatively low-resolution satellite orbital information for the at least one satellite from satellite information obtained from the corresponding plurality of issues of ephemeris data received for the at least one satellite.

2. (Original) The method of Claim 1, deriving the satellite orbital information for the at least one satellite includes obtaining average satellite orbital coefficients from the corresponding plurality of issues of ephemeris data and reducing the resolution of the satellite orbital coefficients obtained.

3. (Original) The method of Claim 1, deriving the satellite orbital information for the at least one satellite includes reducing the precision of satellite information obtained from the corresponding plurality of issues of ephemeris data to a resolution level comparable with almanac data for the same satellite.

4. (Original) The method of Claim 1, deriving the satellite orbital information for the at least one satellite includes eliminating portions of the corresponding plurality of issues of ephemeris data received for the at least one satellite.

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5. (Original) The method of Claim 4, eliminating portions of the corresponding plurality of issues of ephemeris data received includes eliminating at least one of sine and cosine harmonic terms.

6. (Original) The method of Claim 1, deriving the satellite orbital information includes forming a plurality of estimated satellite locations for the at least one satellite based upon the plurality of issues of ephemeris data for the corresponding satellite, and computing satellite orbital coefficients for the at least one satellite based upon the estimated satellite locations.

7. (Original) The method of Claim 6, converting the satellite orbital coefficients to almanac data resolution and format.

8. (Original) The method of Claim 1,
obtaining satellite positioning and velocity information from each of the plurality of issues of ephemeris data;
storing the satellite positioning and velocity information on the satellite positioning system receiver;
deriving relatively low-resolution satellite orbital information for the at least one satellite from satellite location and velocity information obtained from the corresponding plurality of issues of ephemeris data.

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9. (Original) The method of Claim 1, determining location and velocity information for the at least one satellite from the corresponding satellite orbital information derived.

10. (Original) The method of Claim 9, determining a Doppler estimate and uncertainty range for the at least one satellite from the corresponding satellite location and velocity information.

11. (Original) The method of Claim 1, updating the satellite orbital information for the at least one satellite with updated ephemeris data.

12. (Original) The method of Claim 11, obtaining updated ephemeris data if updated ephemeris data is not stored on the satellite positioning system receiver.

Claims 13-40 (Canceled).